



EPOXY POLYESTER POWDER COATINGS

Technical Data Sheet

DESCRIPTION

Alwan **FF160** is a thermosetting powder based on specially selected epoxy and polyester resins which give a protective coating with excellent overbake resistance.

A high performance product particularly suitable for applications where a durable and decorative finish is required such as with domestic appliances, lighting, office furniture, ventilation and electrical equipment.

Excellent spraying properties give good penetration of articles and efficient deposition of powder to minimize overspray.

SPECIFICATION

POWDER PROPERTIES

Chemical type : Epoxy Polyester

Specific gravity : 1.2 – 1.75 g/cm³ depending on colour

Particle size distribution : Applicable for electrostatic spray at 60 – 90 kV

Gel time : 200 - 250 seconds

Shelf Life : 24 months at 27°C maximum storage temperature

Curing schedule : 10 minutes at 180°C (metal temperature)

MECHANICAL PROPERTIES

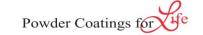
Adhesion ISO 2409 (2mm crosshatch) : Gt=0

Bend test ISO 1519 (cylindrical mandrel) : Pass 5mm

Cupping test ISO 1520 : 6mm

Impact test ISO 6272-1 : >40 Kg.cm (direct and reverse)

Buchholz test ISO 2815 : >90





ENVIRONMENTAL AND CHEMICAL RESISTANCE

Constant Humidity ISO 6270-2 : Excellent no breakdown after 1000 hrs.

Chemical Resistance : Generally good resistance to acids, alkalis, and oils

Water Immersion Resistance ASTM D870 : Pass; 500 hours at room temperature.

May be attacked by nitric acid, ketones and

chlorinated solvents.

Exterior Durability : Some chalking will occur after six months continuous

outdoor exposure but suitable for articles used

outdoors intermittently

TEST CONDITIONS

Determined on degreased cold rolled steel.

Metal substrate : cold rolled steel; degreased

Coating thickness (ISO 2360) : 60 – 90 microns DFT

Curing schedule : 10 minutes at 180°C

Flow out : Smooth

For other substrates, and in order to obtain optimal corrosion protection, it is essential to apply the following

pretreatment prior to powder coating:

For steel : Iron or zinc phosphate

For galvanized steel : Chromate treatment

For aluminium : Chromate treatment

CORROSION RESISTANCE

Alwan FF160 has been tested in a Saltspray Cabinet according to ASTM B 117 - 73, on various

substrates.

Iron Phosphate 500 hours : 10 mm undercutting
Zinc Phosphate 1000 hours : 5 mm undercutting
Chromated Galvanized Steel 500 hours : 10 mm undercutting

Chromated Aluminum 1000 hours : no change

The information given in this Data Sheet is given in good faith and with every belief in its accuracy but cannot be considered as a formal warranty. In accordance with ALWAN's policy of product development, this specification is subject to change without notice.

